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ABSTRACT

A study used error analysis to examine and compare the English language proficiency and language learning patterns of two native Japanese speakers, aged 15 and 17. Data were elicited verbally from the subjects, with more elicited from the older, and analyzed for error patterns. Results indicate striking similarities in error patterns; however, a comparison using Krashen's natural order for second language acquisition disclosed a clear difference in English competence in favor of the older subject. In addition, comparison of the older subject's language use in an elicitation exercise and a free-discussion exercise tended to support style-shift theory, with the subject attending to discourse cohesiveness in the free-talking task. Areas in which second language instruction for these subjects could be improved are identified. Contains 10 references. (MSE)

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Revival of Error Analysis

- As an Effective Tool to Assess Development of Japanese ESL Learners

Hideyuki Taura

1997

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   'Frogs, where are you?'

[ABSTRACT]

Error Analysis (Corder, 1967, 1971, and 1974) was conducted on two Japanese ESL learners, aged 15 & 17, in a two-fold manner in this study. Firstly, the English proficiency of the 2 subjects was compared under experimental conditions. Although EA showed striking similarities in error-making, their comparison using Krashen's natural order for L2 acquisition disclosed a clear difference in their English competence in favour of the older subject. Secondly, two texts taken from the 17-year-old subject under experimental and clinical conditions were compared. The data seemed to support Tarone's style-shift theory (1985). Thus the present Error Analysis turned out to be useful from this pedagogical viewpoint. Furthermore it proved to be an effective tool in revealing the linguistic constituents in which the two subjects would benefit most from instructions to improve their English proficiencies.

1. INTRODUCTION

Learners' errors were regarded as signs of negative transfer from L1 by Contrastive Analysis proponents. Their main concern was to examine the differences of learners' native languages and their target languages in order to predict errors. They argued that their procedures would make a contribution to teachers in that drill exercises in the area of predicted errors would eradicate learners' errors. However, Corder's rigorous examinations on learners' errors (1967, 1971, 1974) revealed that although many errors are caused by L1 interference, many more are due to 'idiosyncratic dialects' (Corder, 1971) or 'interlanguage' (Selinker, 1972, cited in Ellis, 1994, p30), which refers to temporary grammars built on learners' way to full mastery of L2 (Ellis, 1994). According to Corder, errors are the reflection of L2 learners' internal grammar and they take a very similar developmental course to that of children's acquisition of L1. Corder also maintains that regardless of their native tongues, L2 learners show similar developmental sequences, which he believes to be guided by an 'inbuilt syllabus' (1967). This has led Corder to engage in Error Analysis (EA, henceforth) as a tool to disclose the mental process of SLA, that is, the systematicity or universality of the L2 learning processes. Eventually in the FLA field, researchers such as Bloom (1970), Brown (1973), de Villers and de Villers (1973), and Clark & Clark (1977) have found evidence for the fixed acquisition sequence for English grammar, in particular morphology (Ellis, 1994). Similar sequences have been reported in the SLA field by a number of studies such as Dulay & Burt (1973, 1974), Bailey, Madden, and Krashen (1974), and Larsen-Freeman (1976) (all cited in Ellis, 1994).

In analyzing errors, Corder (1967) makes a distinction between errors and mistakes, since clues to learners' mental grammar could be obtained only through 'errors' in a strict sense. He defines 'errors' as derived from a learner's *competence* in the Chomskyan way, thus truly reflecting upon their transitional state of developmental grammars. 'Mistakes', on the other hand, are defined as errors of *performance* and the product of 'chance circumstances', analogous to native speakers' slips of the tongue (1967, p166). Thus EA focuses on errors not mistakes. However, the difficulty of distinguishing errors from mistakes and the ambiguity of the definitions are pointed out by Corder himself as well as other researchers such as Dulay, Burt, and Krashen (1982) and Ellis (1994). This has led Dulay, Burt, and Krashen to use the term 'errors' to comprehensively cover 'deviations that have not yet been classified as performance or competence errors' (p139). Viewing this issue from a different angle, Ellis

makes an insightful comment that the distinction takes it for granted that 'competence is homogeneous rather than variable' (p51). This issue has been partly solved by such suggestions as Corder's three stages of errors: (1) the presystematic stage when learners are unaware of the existence of a particular system or rule, (2) the systematic stage when learners have discovered and been using some rules, but they are wrong, and (3) the postsystematic stage when learners know the rule but use it inconsistently. However this difficulty of distinguishing errors from mistakes is one of the limitations which EA researchers need to make an improvement on. Nonetheless, EA is still used 'as a partial and preliminary source of information at an initial stage of investigation' (Hammarberg, 1973, cited in Ellis, 1994, p68). By eliminating obvious problems and adopting the most recently modified version of EA as much as possible, the present study conducts EA with Japanese learners of English.

2. DATA COLLECTION METHOD

2.1. Subjects

There are two subjects from whom data were elicited for EA. The main subject is a 17 year old Japanese girl learning English as her second language. She began to learn English 4 hours a week in a formal classroom situation in Japan when she was 12. At the age of 15 she moved to Australia where she was completely exposed to English both at school and in a dormitory. Her learning experiences were through formal (grammar-translation) instruction for the first 3 years, while she has been in naturalistic environment for the past one and a half years. Her current English proficiency is high-intermediate level. The other subject is a 15-year-old Japanese girl, who started learning English as a foreign language at the same high school as the main subject at the age of 12. Her total learning experiences are 2 and a half years of formal instruction in Japan. Her current English proficiency is high elementary level.

2.2. Data-collection procedures & materials

Regarding data-collecting methodology, Ellis (1994, p49) notes that many EA studies are 'difficult to interpret and almost impossible to replicate' because they have neither identified nor controlled such factors as learners' L1, L2 proficiency, the L2 learning environment (formal or naturalistic), or the medium of data collection (written or spoken). Making a further comment on this last factor of data collection medium, he quotes (p50) Lococo's findings (1976) that the number and type of errors in learner language vary, depending on the manner in which the samples are collected - experimental or clinical elicitation. Corder (1974, p126) differentiates the two elicitation methods by calling the experimental or controlled production 'error-provoking', and the clinical or spontaneous production 'error-avoiding' ('avoiding' in the sense that learners might deliberately avoid some linguistic areas uncertain or unfamiliar to them). Taking this argumentation into consideration, the present study takes both clinical and experimental elicitation methods to gain the global view of an L2 learner language.

An experimental method in this study is designed to elicit data by asking the main subject to describe a series of pictures presented to her. Prior to audio-recording, a 10-minute-long preparation time was allowed to look through the pictures. This material was taken from a picture book 'Frog, where are you?' drawn by Mercer Mayer (Appendix) and previously used by Bamberg (1987) for eliciting narratives from children. The book, which contains 24 pictures in sequential order representing a real story with no written texts, has been proved to be useful in that narrators face a task of putting simultaneous activities in order. The same

procedures were applied to the other subject to obtain data for a between-subject analysis. Clinical elicitation, on the other hand, involved a monologue on the topic in which the main 17-year-old subject was most interested, that is, an astrophysics camp in which she recently participated. She was asked to talk freely about the camp in the presence of the researcher with no rehearsal allowed. The data, which were to be collected by audio-taping, were compared with the data from her experimental data for a within-subject analysis. Thus clinical data were not collected from the other subject.

Experimental data from both subjects and clinical data from the main subject are transcribed in the Appendix.

3. ERROR ANALYSIS PROCEDURES AND RESULTS

3.1. Identification of errors

Corder's distinction between errors and mistakes (1974) has been criticized as ambiguous and impractical, as seen earlier. Therefore, although adopting Corder's notion of this difference, this study takes a more cautious definition of 'errors', which is put forward by Lennon (1991, p182):

> a linguistic form or combination of forms which, in the same context and under similar conditionsof prod uction, would, in all likelihood, not be produced by the speakers' native speaker counterparts.

In the actual error analysis, the present study adopts the procedures suggested by Corder (1974) as a baseline with minor modifications added as necessary, namely: (1) data-collection, (2) identification of errors, (3) classification of the errors identified, (4) explanation of the psycholinguistic causes of the errors, and (5) evaluation or error gravity ranking of the errors.

In identifying errors, Corder (1974, p127) states 'all learner's utterances must be presumed erroneous until shown to be otherwise' and he categorizes utterances into three types for interpretation - normal (not apparently erroneous), authoritative (asking the speaker to arrive at the knowledge of what he/she meant to say), and plausible (inferring the intended meaning by the surface structure and context). There has been criticism as to the authoritative interpretation on the grounds that 'retrospective accounts of intended meanings are often not reliable' (Van Els et al, 1984, cited in Ellis, 1994, p54) and that such a procedure presupposes L2 learners' possession of metalinguistic abilities. Therefore this study includes plausible errors, not authoritative interpretations.

3.2. Classification of the errors identified

The description of learner errors involves the process of comparing the original idiosyncratic utterances and the reconstructed utterances under certain taxonomies. Regarding categorizing errors, researchers have used various taxonomies (e.g. Burt & Kiparsky, 1972; Politzer & Ramirez, 1973; Duskova, 1967, cited in Ellis, 1994, p54-55). Corder, for instance, suggests distinguishing three types of errors depending upon their systematicity - presystematic, systematic, and postsystematic errors. However this taxonomy focuses on discovering how learners learn L2, not demonstrating which errors are most frequent.

Attempting to cover both areas, the present study adopts the following two taxonomies, namely, linguistic and surface strategy taxonomies. Politzer and Ramirez's linguistic taxonomy (1973) is followed with an extra phonology category added: morphology, syntax, vocabulary, and phonology. As for surface strategy, Dulay, Burt & Krashen's taxonomy (1982) is adopted: omission, addition, misformation, and misordering. The reasons for which two different types of taxonomies are used in this study are (1) they are the most commonly used ones and (2) a combination of two different types would be more useful as Dulay, Burt, and Krashen (1982) argue 'each component of language should be studied separately and thoroughly before conclusions can be generally applied across components' (p146).

As for quantifying the different types of errors, Ellis (1994, p57) notes that many EA researchers are inconsistent with the way in which they present the results - from no error frequency supplied, to absolute frequencies. Taking the point made by Ellis (1994, p57), this study shows relative as well as absolute frequencies in order to make worthwhile comments about error frequency.

3.2.1. Linguistic Taxonomy Schema

Table 1 shows a list of errors found in the corpus of both subjects when they were telling stories in experimental conditions. The errors are categorized according to linguistic constituents.

Table 2 is a list of errors drawn from the corpus of the free talking by the 17-year-old subject under clinical conditions. Error categorization is the same as table 1.

Experimental conditions by the 15-/17-year-old subjects: 'Frog, where are you?'

«Table 1»

Linguistic Catergory and Error Type		17-year-old girl's corpus	15-year-old girl's corpus
1. Article	• *the* or *that* for *a* (or vice versa)	on *that* night *a* singing voice of frogs	*there was the* honeybomb found *the* nest got the frog
	• omission of the article	with loved voice-with *a* all in sudden-all of *a* sudden a singing voice - the singing voices	in (*the*) case of
	• unnecessary article	in *the* midnight-at midnight in *the* front of Jason	
	• others	with his glass - with the glass	
2. Number	• substitution of singulars for plurals (or vice versa)	one of their *child* had chats - had a chat	the *bee* were these bee(s)
	• adding -s to plurals already formed	were many *childrens*	
3. Pronouns	• omission of the subject	and started-and *they* started started - it started	
4. Preposition	• unnecessary prepositions	ended up *with* sticking	
	• misuse of prepositions	hole *of* the tree - *in* the tree all *in* sudden-all *of* a sudden went *to* the directin of in *the* midnight-at midnight hole *on* that tree - in that tree	take it *out* from the tree dropped him *to* the pond *in case of* Peter - *as for* Peter take honeycomb *from* the tree
5. Verbs	• agreement of subject/verb	Nathan and his family *was*	there *was* some frogs he'll *does* - he'll do
	• verb-verb construction		they heard frogs *were* croaking
	• misuse of tenses	Nathan*'s* escaped-Nathan*'d* Nathan's gone-Nathan'd gone Michael *tries* -Michael *tried* Nathan's not-Nathan wasn't Michael's-Michael was and *look* for - and *looked* for he *can* see - he *could* see he thought *is* -he thought *was* what's going-what was going they're - they were	they've just got-they'd just got Tony has gone-Tony had gone something *smells* -smelt the deer *run* - ran Peter and Mac's - were he'll - he would
	• misuse of verbs		he *had* scared - he *was* scared
	• misuse of auxiliary verbs		couldn't notice - didn't notice
6. Structure	• inappropriate structure	so angry *and* -so angry *that* they	the deer dropped him *and also Ma*
7. Vocabulary	• nouns	*glass tank* - basin *end* - edge *children* - *young frogs*	*bottle* - basin nest - nest hole real animal - animal
	• verbs	*escaped* - ran away	could - was able to
	• pronouns	*one* - the other	
	• adjectives	loved voice - loving voice	
	• adverbs	there - then	*next* - then
8. Phonology	• mispronunciation	/freʃt/ - crashed /oul/ - owl /aul/ /faif/ -wife	/da:riŋ/ - during /dɛndʒɛrəh/- dangerous /ðə/ owl - /ði/ owl /oul/ - owl /aul/ /kraukiŋ/ - croaking

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<<Table 2>> Clinical condition by the 17-year-old subject: a talk on space camp

Linguistic Categor	and Error Type	17-year-old girl's errors/possible reconstruction
1. Article	• the for a	the application - an application
		the astronaut - an astronaut
		the professor - a professor
	• misuse of determiners	this space school - a space school
	• an for a	an really - a really
	• omission of articles	we had talk from - we had a talk from
		Power House - the Power House Museum
		sort of lecture - sort of a lecture
		group photo - a group photo
		go to museum - go to a museum
		University of NSW - the university of NSW
		went to city - went to the city
	• misuse of articles	in (the) front of, after (the) dinner
2. Number	• singulars for plurals	photo - photos
		one of my friend - one of my friends
3. Pronouns	• omission of subjects	was so tiring - it was so tiring
		wasn't very good - it wasn't very good
	• alternating use by number	it - them (referring to rockets and balloons)
	• omission of relatives	the place we were - the place where we
4. Verbs	• misuse of tenses	it's been - it was a while age now
		there is an opton - there was an option
		it looks good - it looked good
		we leave - we left
		we get to know - we got to know
		we has - we had
		I thought it was - I think it was
		who went - who had gone
	• disagreement of sujbect and tense	there is an option - there was an option
		I thought - I think
		they benefits'd - they benefited
		one who're - one who's
		we has - we had
		talks was - talks were
	• regularization	flied to Sydney - flew to Sydney
	• omission of verb	had group photo - had a group photo taken
		people interested - people were interested
		everyone so excited - everyone was so excited
5. Structures	• wrong forms	introduced us that - introduced us to
	• word order	whole an hour - a whole hour
6. Vocabulary	• redundancy	2 hours of shopping time - 2 hours of shopping
	• omission	Power House - Poser House Museum
		a few (other) people
	• misuse	particular interested - particularly interested
		smart scientist - bright (clever) scientist
		had a talk - gave a talk
		an option - an opportunity
		were at NSW University - arrived at
7. Phonology	• mispronunciation	/fri:zink/ - freezing ?
		walksound - walked around ?
		/ un/ Japanese nodding !
		/respnetari/ responded her ?
		/west/ the campus - went to (?) the campus
8. Intonation	• misuse of rising tone	and overseas ↑.
	• misuse of falling tone	as well ↓ as a very
9. Prepositions	• misuse	look for future - look to the future

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3.2.2. Surface Strategy Taxonomy Schema

Table 3 (experimental) and 4 (clinical) highlight the ways which surface structures are altered in terms of omission, addition, misformation, and misordering.

<< Table 3>>

Strategies	17-year-old girl's corpus	15-year-old girl's corpus
1. Omission (Grammatical morphemes)		
• article	(a) loved voice	in (the) case of
	all in (a) sudden	
• conjunction	so angry (that) they started	
	there - then	
• pronoun	(it) started to	
	(they) started	
• past tense	look(ed) for	run - ran
• plural		the bee(s)
2. Addition		
• Double marking	childrens	he'll does
3. Misformation		
• altering forms	children of them - children of theirs	the bee(s)
4. Misordering		
		*the deer dropped him to the pond and
		the deer dropped him and also Mac to

<< Table 4>>

Strategies	17-year-old girl's corpus (Australian International Space School)
1. Omission	
Grammatical morphemes	
• article	(a) talk, (a) lecture, (a) group photo, go to (a) museum, (the) Universit
• pronoun	(it) wasn't, the place (where) we were meant to meet
• copula be	people (were) interested, everyone (was) so excited
• past tense marker	before we leave (left)
• plural	one of my friend(s)
• adverbial marker	I wasn't very particular(ly) interested
Content morphemes	
	had group photos (taken)
	Power House (Museum)
2. Addition	
	they *benefits'd* from the experience
	2 hours of shopping *time*
3. Misformation	
• regularization	we *flied* to Sydney - we flew to Sydney
• archi-forms	she suggested us *to do* whatever - she suggested to us that we should do whatever
	teacher introduced us *that there is* - teacher introduced us *to this space school*
• altering forms	we couldn't finish *it* (referring to model rockets and hot balloons)
4. Misordering	
	In April, I think it was - I think it was in April

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3.3. Explanation of the psycholinguistic causes of error

This section concerns accounting for why and how errors occur. Similar to the various types of taxonomies in identifying errors, a number of sources of learners' errors have been proposed (e.g. Richard, 1971a & b; Lott, 1983; Dulay & Burt, 1974; Flick, 1979, all cited in Ellis, 1994, 58-61). This study distinguishes error sources into three categories - developmental (intralingual), interlingual (interference from L1), and unique (neither intra- nor inter-lingual), since this differentiation proposed by Dulay, Burt, and Krashen (1982) seems to 'provide an operational procedure for establishing which errors are intralingual by using L1 acquisition errors as a baseline' (Ellis, 1994, p60). Dulay, Burt, and Krashen's lists of English L1 error types and corresponding L2 errors (1982, p166) are referred to, in deciding if errors are developmental or not. The researcher's own intuition was used to judge whether or not errors are caused by L1 (Japanese) negative transfers, since his L1 is Japanese. Those errors where it is difficult to infer their causes or which might fall into both intra-and inter-language errors are grouped under unique errors. The summary of the 3 texts are in the table 5. Errors are counted according to linguistic taxonomy.

<<Table 5>>

	Developmental	Interlingual	Unique	Total
17*: frog story	**42 (91%)**	**4 (9%)** •hole *of* the tree - hole *in* the tree •*there* for then •crashed/frăCt/, wife/faif/	**0**	**46**
15*: frog story	**31 (97%)**	**0 (0%)**	**1 (3%)** •the deer dropped him to the pond and also Mac (him and Mac to the pond)	**32**
17: space story	**51 (91%)**	**3 (5%)** •the place (where) we •2 hours of shopping time • /un/ Japanese nodding	**2 (4%)** • had a group photo (taken) • Power House (Museum)	**56**

(* 17 = the 17-year-old subject, 15 = the 15-year-old subject)

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3.4. Evaluation and gravity ranking of the errors

While the preceding stages of EA concern errors from an L2 learners' perspective, the error evaluation involves examining the effects of errors placed on the listener or reader. Underlying this analysis is the question of which errors cause miscommunication. Concerning this issue, Corder (1974) divides errors into 'overt' and 'covert' errors. Overt errors refer to clear deviations from norms which no native speakers would utter but might be plausibly interpretable. Covert errors are those superficially well-formed but not meaning what speakers intended to mean. Similar distinction is proposed by Burt and Kiparsky (1974, cited in Lennon 1991, p183), in categorizing errors into (1) global errors which affect overall sentence organization, and (2) local errors which affect single constituents in a sentence. Some researchers (Burt, 1975; Tomiyama 1980; Khalil, 1985, all cited in Ellis, 1994, p63) explore this difference in types of errors from another angle as well, in terms of comparison of native and non-native speakers judgements on errors. As far as error gravity is concerned, this study explores the global/local differences from a wider prospective perceived by both native speakers of English and a non-native speaker.

All the errors found in the 3 texts are classified as either global or local. Table 6 shows the number and percentage of each error category, and global errors. Linguistic taxonomy is adopted in counting errors.

<<Table 6>>

	Total	Local	Global
17: frog story	50	46 (92%)	4 (8%)
		•Now they were separated (they:owl/Jason or Michael/Jason?)	
		•many children of them (them:Michael/Jason?)	
		•give one of their children (parents wouldn't give children away!)	
		•promise to see each other (each other:Michael/Jason or frogs)	
15: frog story	36	32 (89%)	4 (11%)
		•So he changed that next which had on the tree (unintelligible)	
		•during that time (which 'that time', not specified enough)	
		•Luckily: meaning 'no hurt' or 'to see again' ?	
		•Tony gave one of his children (parents wouldn't give children away)	
17: space	59	54 (93%)	4 (7%)
		•interested in that's science (that's: doesn't make sense)	
		•look for future (look for the future?)	
		•/as tu:bik/ (unintelligible)	
		•it was really unorganized ---- 5, 6 years (no cohesive chains)	

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As for the comparison of native and non-native speakers judgements on errors, 79% (43 out of the total 55 errors in the 17-year-old subject's talk on her space camp) were pointed out and corrected in the same fashion by both 2 native speakers (one teacher, the other non-teacher) and the non-native speaker (ESL teacher). Of the remaining 21%, 5% of the errors were pointed out as erroneous by both NS and NNS but different corrections were given. The remaining 16% of the errors are those which either NS or NNS judged acceptable whereas the other non-acceptable. The summary is shown in Table 7.

<<Table 7>>

<1> different corrections given

• teacher introduced us that there's an option

NS: the teacher told us that there's an option

NNS: the teacher introduced to us this space school

• we filled in the application form

NS: we filled in the application forms

NNS: we filled in an application form

• It was good to make in groups

NS: It was good to work in groups / make models in groups

NNS: It was good to make groups

<2.1> corrections made by NS, not by NNS

• there is an option - there is an opportunity

• this space school - a space school

• went to city - went to the city

• Power House (Museum) - the Power House (Museum)

<2.2> corrections made by NNS, not by NS

• it started from July 23 - it started on July 23

• we went to the place we were meant to meet

- we went to the place where we were meant to meet

• the astronaut from NASA - an astronaut from NASA

• 2 hours of shopping time - 2 hours of shopping

4. DISCUSSION

This section first discusses the differences (if any) in the quality and quantity of errors between the corpora elicited by the two subjects under the experimental conditions. Secondly, the experimental and clinical data, which are both elicited from the 17-year-old subject are compared in terms of style-shift. Thirdly variabilities in the corpus (Text 1) by the 17-year-old subject are closely examined. Prior to any further discussion, it should be pointed out that the data obtained through surface strategy taxonomies are covered in more detail under linguistic taxonomies, as can be seen in Tables 1 and 2. This could be caused by the unfamiliarity of the researcher with this error analysis method. Or it could have been brought about by the corpora on which this error analysis happens to be conducted. Since there is no deciding exactly what caused it at this stage, the analyses of the corpora henceforth use the data gained under linguistic taxonomies over surface strategy classification: 41 linguistic errors in the 17-year-old subject's text in the experimental condition, 31 in the 15-year-old subject's corpus, and 55 in the clinical data by the 17-year-old subject. In global/local error counting, the number of errors increased from linguistic error counting, due to the fact that some global errors could not be categorized under any linguistic constituents: 50, 15, and 17 errors respectively for the 17-year-old & 15-year-old experimental condition, and the clinical condition.

4.1. A between-subjects analysis in experimental conditions

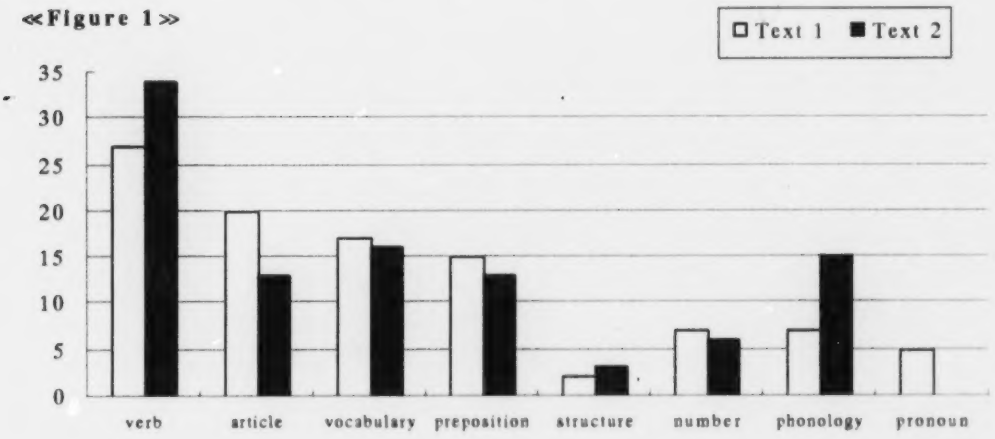
The corpus obtained by the 17-year-old subject (Text 1, hereafter) contains 498 words while that by the 15-year-old subject (Text 2, henceforth) holds 335. In order to make the comparison easier, a simplified version of Table 1 is shown in Table 8 and Figure 1.

≪Table 8≫ error percentage (%) of each linguistic constituent

	verb	article	vocabulary	preposition	structure	number	phonology	pronoun
Text 1	27	20	17	15	2	7	7	5
Text 2	34	13	16	13	3	6	15	0

*27 meaning that verb errors in Text 1 account for 27 % of all the errors in Text 1

«Figure 1»



Taking it into consideration that the corpora are not very large, which might cause sharper deviations in comparison to the averages taken from a larger database, the error percentages in both texts are surprisingly similar. The mean error frequencies per 100 words in Text 1 and 2 also indicate a similarity of 9.2 and 9.6 respectively. Text 1 accommodates 1.49 times as many words as Text 2 while Text 1 holds 1.44 times as many errors as Text 2. These data seem to suggest that errors committed by the subjects resemble each other in terms of frequency and linguistic quality, as long as the errors in both texts are representing the subjects' linguistic competence.

How efficiently the subjects deal with verbs and articles - two constituents most likely to result in errors in by Japanese learners of English - are also examined in order to calculate the error ratios, since EA is criticized that it fails to provide a complete picture of learner language on the grounds that it pays no attention to what learners can do as Ellis (1994, p67) contends. Text 1 produced 50 occasions where articles should be used, 8 out of which were erroneous - 16%, while Text 2 produced 14%. As for 'tense', 15% were erroneous in Text 1 and 13% in Text 2. These data appear to support similar error frequencies in comparison with correct usage frequencies in both texts, as well.

Drawn on the data from Table 5 regarding intra-/inter-language errors, over 90% are developmental. A closer examination of the two phonological errors in Text 1 reveals that /ɹræʃ/ for crash and /faif/ for wife could have been uttered due to too much and overt attention,

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both consciously and unconsciously, to English sounds non-existent in Japanese such as /f//v/. (An interesting example can be seen in the corpus in the clinical condition by the same 17-year-old subject when she corrected herself /fə:st/ immediately after she said /hə:st/ for 'first'.) However the pronunciation /faif/ could be interpreted that the sound /f/ in the immediately following syllable induced the same sound in the preceding syllable, which happens to native speakers as well. If this interpretation is correct, then 93% of errors in Text 1 are developmental. In any case, there is no doubt that both subjects show no practical differences in that their vast majority of errors are developmental. In drawing this conclusion, one must consider at the same time that (1) the definitions of 'developmental errors' in this study rely totally upon the reliability of the error lists put forward by Dulay, Burt, and Krashen (1982), and (2) the present corpora are limited in number, thus there is no guarantee that same sort of result would be brought about with a larger corpus even by the same subjects.

As for the gravity of errors, local errors account for 92% and 89% in Text 1 & 2 respectively as shown in Table 6. Each subject made 4 global errors, which are not clearly caused by L1 transfer. As far as local and global errors are concerned, resemblances could be seen in the subjects.

Finally errors in both texts are compared with the natural order of L2 acquisition proposed by Krashen (1977). His order as well as error ratios in each text are briefly summarized below.

<<Natural order for L2 acquisition proposed by Krashen 1977>>

	Text 1	Text 2
-ing	11/11 = 100%	5/5 = 100%
plural	6/8 = 75%	2/3 = 67%
copula	14/14 = 100%	3/5 = 60%
auxiliary	15/16 = 93%	3/7 = 43%
article	42/50 = 84%	25/29 = 86%
irregular past	19/19 = 100%	13/14 = 93%
regular past	17/17 = 100%	7/7 = 100%
3rd person singular	0/0 = NA	1/2 = 50%
possessive *-s*	3/3 = 100%	2/2 = 100%

* Figures below 80% are heavily underlined

This shows that *-ing* forms, for example, should be used on 11 occasions in Text 1 and 11 correct forms were used - 100% correct. The 17-year-old subject seems to have acquired all the linguistic forms listed here, except for plurals, if more than 80% is to indicate the acquisition of that item. The 15-year-old subject, on the other hand, is still in the learning stage for at least 4 out of 9 linguistic areas. Since the present corpus used for comparison are so limited, they do not allow for any further inferences as to the appropriateness of Krashen's L2 acquisition natural order such as Hakuta's (1974, cited in Ellis, 1994, p95) low ranking of articles in the case of Japanese learning English. One could only mention the difficulty of plurals for Japanese learners because their L1 does not distinguish numbers in the same way as English does.

Overall, EA shows resemblances in the quality and quantity of errors made by the two subjects. Almost all of their errors are developmental as well as local. The linguistic areas in which they are most likely to make errors are verbs, followed by articles and vocabulary. However, comparison of the EA results with Krashen's natural order for L2 acquisition clearly disclosed differences in the quality of errors between the two texts. The 17-year-old subject seems to have accomplished all the developmental stages while the other subject is still in her learning stages at least in 4 of the linguistic components - plural, copula, auxiliary, and 3rd person singular forms. Not much could be inferred due to the limited corpus used, however it would be one way of interpreting the differences in competence between the two subjects that the longer learning period as well as learning environment enjoyed by the older subject has made her a more competent English user.

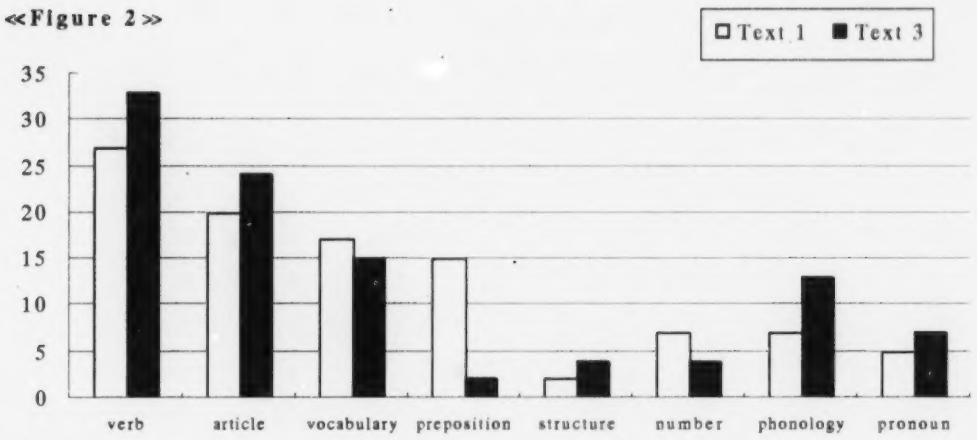
4.2. Style-shifting in the experimental and clinical conditions

Text 1 and the corpus elicited by the 17-year-old girl in the clinical condition (Text 3, hereafter) are explored in terms of their similarities and differences. Firstly, Tables 1, 2, 5, 6, and 7 are put together in a simplified comparison in Tables 9 & 10 and Figure 2.

≪Table 9≫ error percentage of each linguistic constituent

	verb	article	vocabulary	preposition	structure	number	phonology	pronoun
Text 1	27	20	17	15	2	7	7	5
Text 3	33	24	15	2	4	4	13	7

<<Figure 2>>



<<Table 10>> intra-/inter-lingual errors, and global/local errors

errors	developmental	interlingual	unique	total	global errors	local
Text 1	91%	9%	0%	46	8%	92%
Text 3	91%	5%	4%	56	7%	93%

Tables 9 & 10 and Figure 2 indicate that the experimental and clinical conditions did not cause any major differences in error-occurrence. Errors in both conditions are mostly developmental and at the same time they rarely affect the global meanings in discourse. As for the linguistic constituents, the errors in both texts take a very similar pattern in most linguistic fields, apart from preposition errors. Although preposition errors account for 15% of the total errors in Text 1 and only 2% in Text 3 (Table 9), the difference does not seem substantial when seen from another angle, that is, the accuracy rate. Table 11 shows how accurately individual linguistic constituents are used in each text. There are 70 occasions, for instance, in Text 1, in which prepositions should be used, 64 of which are correctly used. In both texts, the preposition accuracy rate is kept constantly high with virtually no differences.

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<<Table 11>> Accurate use of prepositions, articles, and pronouns

	prepositions	articles	pronouns
Text 1	64/70 = 92%	42/50 = 84%	36/40 = 90%
Text 3	99/100 = 99%	39/52 = 75%	96/100 = 96%

Along with prepositions, accuracy rates for articles and pronouns are included in Table 11 to validate Tarone's theory on style-shifting (1985, cited in Ellis , 1994, p146-7). She argues that elicitation methods induce different patterns in errors: L2 learners use a careful style in grammaticality judgement tests, attending to grammatical morphemes and structures such as third person *-s* and plural *-s*, whereas in narrative tasks they attend to discourse cohesiveness with the results that articles and object pronouns are used more accurately because they serve as important markers of discourse cohesiveness. According to this theory, errors in articles and pronouns are less likely to occur in Text 3 (clinical condition) than Text 1. This holds true with pronouns, but not with articles. This discrepancy could be interpreted from a few different perspectives. One way of explaining it is to examine the gravity of article errors in Text 3. The tables 2 and 6 show that the article errors are all local, not global errors. This view is supported by both NS and NNS as seen in the table 7. Therefore it could be at least concluded that the principle of attending to 'discourse cohesiveness' is adhered to in Text 3. Evidence for this could also be obtained from the sharp drop in mean error frequency per 100 words from Text 1 to Text 3 in Table 12.

<<Table 12>> mean error frequencies and article errors

	total words	linguistic errors	mean error frequency/100words
Text 1	498	46	9.2
Text 3	830	55	6.6

Another interpretation for the discrepancy would be that articles are one of the linguistic constituents which Japanese learners of English find most the troublesome and difficult to

master. This could cause deviations in one corpus to another, especially when the corpus is not large enough such as Texts 1 and 3. Another interpretation could be that English proficiency of the subject is not at an advanced level as yet, therefore consistent results might not be obtained even on the same elicitation methods. However, it goes without saying that a larger corpus is needed to obtain a valid reasoning for this discrepancy.

4.3. Analysis of variability in Text 3

This variability analysis focuses on two features found in Text 3 - usage of the word 'child' and tenses.

Firstly, there are three instances where 'child' is used - 'many childrens', 'one of their child', and 'one of the children'. In the Text 1, 'child' is the only noun that takes on an irregular plural form. The subject made no other plural mistakes with regular nouns. Considering the subject's proficiency in English, it is surprising that she makes such a mistake, but it could be inferred from the three examples that as far as the plural form of 'child' is concerned, she is aware that it takes an irregular plural form but is not sure of the correct form.

The subject made 11 tense errors in Text 1, which accounts for 15% of the total of 71 main verbs. Some of the errors seem to be made systematically while others not. Firstly the systematicity is examined, followed by the non-systematic error analysis.

In the text, there are 2 instances where past perfect tenses should have been used, however all have been replaced with the present perfect. Along with similar errors in Text 3, the subject does not seem to have acquired past perfect form as yet. Judging from the fact that there is not even a trace of varied or deviated forms of the past perfect tense, it could be further interpreted that she is not even aware of the form because it does not exist in her L1. Another interpretation could be that she regards the present perfect form as a form covering both present and past perfect tenses. Since there are neither present nor perfect tenses used in the correct

manner in the text, no definite conclusion is possible at this stage.

Secondly, the combination of proper names (nouns) and 'be' are investigated. Two errors are made - 'Michael's shaking' (correct form: Michael was shaking) and 'Nathan's not' (Nathan was not), while there are two correct forms - 'Michael was running' and 'Michael was following'. Pronouns and 'be', on the other hand, do not seem to cause as much trouble - only 3 errors out of 17 instances. This could mean that the subject has not acquired this <proper names + 'be'> form properly yet, and has used the correct forms by chance. It could be also interpreted that the contracted (proper noun + 's) form are used as meaning both present & past tenses, since there are such errors as 'what's going on (correct form: what was going on)' and 'they're (they were)'. More data are required before any conclusion can be reached concerning this matter as well.

The text holds three non-systematic errors (3 out of the total 63 main verbs in the text, which accounts for only 4.8%) after eliminating the two types of systematic errors explored above. They are 'they look (correct: looked)', 'he can (could)', and 'what he thought is (was)'. This corpus includes cases such as 'he looked into', 'what happened with Michael was', and 'he couldn't manage'. Thus in interpreting these errors, it could be safely said that she has almost 'acquired' (using Krashen's term) the skill of using present-past tenses on the learning-acquisition continuum, considering more than 95% of the past tenses were produced correctly, rather than she is not aware of the present-past distinction for those words.

5. CONCLUSION

EA was conducted in two-fold manner in this study. Firstly, English proficiency of 2 subjects were compared under experimental conditions. Although they seem to bear striking similarities in error-making through EA, their comparison with Krashen's natural order for L2 acquisition disclosed a clear difference in their English competence in favour of the older subject. Secondly, the two texts in the experimental and clinical conditions drawn from the 17-year-old subject were compared. The overall data, apart from the 'article' errors, seem to support Tarone's style-shift theory (1985). That is, the subject attended to discourse cohesiveness in the free talking task. Some plausible reasons for the discrepancy of article errors were speculated, however no definite conclusion was possible without a larger corpus.

From a practical point of view, the present EA revealed the linguistic constituents in which the two subjects would benefit most from instructions to improve their English proficiencies. They are past perfect tenses, contraction forms, and the plural form of 'child' for the 17-year-old subject while plural, copula, auxiliary, and 3rd person singular forms applied to the 15-year-old subject . From a pedagogical standpoint, EA turned out to be more useful when it referred to what learners can do as well as what they cannot do. However no pragmatic competence was argued due to the lack of 'ready-made' tools to apply it with. The global errors which were dealt with in this study could possibly be applied as they only need an extra subcategory of pragmatics in addition to the existing semantic subcategory. More scrutiny on prosodic features as well as self-correction on errors would be needed to grasp the overall picture of L2 learners in future research.

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